Jet Propulsion Laboratory NPL

Size: 176 acres
Mission: Conduct research and develop aeronautics, rocketry, and space exploration technology
HRS Score: 50.00; placed on NPL in October 1992
IAG Status: IAG between NASA and EPA signed in 1992
Contaminants: VOCs and various inorganic chemicals
Media Affected: Groundwater
Funding to Date: $0.6 million
Estimated Cost to Completion (Completion Year): $0.2 million (FY2001)
Final Remedy in Place or Response Complete Date for All Sites: NA

Pasadena, California

Restoration Background

In 1980, samples from drinking water wells of the city of Pasadena were found to be contaminated with volatile organic compounds (VOCs), including trichloroethane (TCA), trichloroethene (TCE), and tetrachloroethene (PCE). NASA and the California Institute of Technology Jet Propulsion Laboratory initiated an environmental study to determine whether the Jet Propulsion Laboratory was a potential source of the contaminants. A Preliminary Assessment and a Site Inspection were conducted, and an Expanded Site Inspection was completed in FY90.

In October 1993, the Omaha District of the U.S. Army Corps of Engineers (USACE) proposed an Interim Settlement Agreement to NASA and the California Institute of Technology Jet Propulsion Laboratory for DoD participation in funding environmental restoration activities.

For study and cleanup, the laboratory site was divided into three operable units (OUs): on-site groundwater contamination (OU1), on-site contamination sources (OU2), and off-site groundwater contamination (OU3). In addition, the installation identified eight waste disposal areas. NASA prepared and submitted a Remedial Investigation and Feasibility Study (RI/FS) work plan to EPA for approval. NASA is the lead agency for the RI.

In FY94, RI/FS activities began with the installation of groundwater monitoring wells at OU1. RI fieldwork at OU3 also was initiated. RI/FS activities continued during FY95 with a second sampling round for on-site soil vapor extraction wells.

In FY95, an Interim Remedial Action (IRA) was implemented, involving installation of a groundwater treatment system for contaminated municipal wells.

Five off-site groundwater monitoring wells were also installed, and one round of groundwater samples was collected.

In FY96, NASA conducted a second round of groundwater sampling at five off-site monitoring wells. Three additional monitoring wells were installed to determine the direction of groundwater migration beneath the installation. Four soil-gas probes were installed to determine the extent of vertical migration of contamination. NASA completed all off-site drilling at the installation.

In FY97, NASA conducted quarterly off-site well sampling and monitoring, and risk assessment analysis was developed. NASA also completed the on-site RI and began the FS. Pilot treatment plants for VOCs and perchlorates (an additional contaminant of concern, which previously could not be detected) were implemented and may result in Interim Actions.

FY98 Restoration Progress

The draft RI for OUs 1 and 3 were completed by NASA and the Jet Propulsion Laboratory. An FS perchlorate pilot study using ion-exchange resins and a cathodic system is under way.

Plan of Action

- Complete the Record of Decision for OU1 and OU3 by FY01
- Begin groundwater hydrology modeling of Raymond Basin in FY99
- Begin cost sharing negotiations in FY99

FY99 Funding by Phase and Relative Risk